



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/887,168	06/25/2001	Taro Ito	Q64711	9038

7590 06/14/2005

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC  
2100 Pennsylvania Avenue  
Washington, DC 20037

EXAMINER

HARRISON, CHANTE E

ART UNIT PAPER NUMBER

2677

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/887,168

Applicant(s)

ITO, TARO

Examiner

Chante Harrison

Art Unit

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 13 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13 and 18-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This action is responsive to communications: Request for Reconsideration, filed on 12/20/04.
2. Claims 13, 18-20 are pending in the case. Claims 13 and 19 are independent claims.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 13 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroshi Shirouzu, U.S. Patent 5,502,795, 3/1996, and further in view of Kazuhiko Tachibana, U.S. Patent 5,898,440, 4/1999.

As per independent claims 13 and 19, Shirouzu discloses a first element which produces partial straight lines (col. 4, ll. 9-11, 52-54; Fig. 1), each of which is parallel to one of a vertical or a horizontal line, from a line (Fig. 18 i.e. "316"; col. 4, ll. 52-54); a second element which separates a color brightness parameter of each of said partial straight lines (col. 4, ll. 41-49); and a third element which produces ranges located

Art Unit: 2675

adjacent to said partial straight lines (i.e. intensity values between the start and end coordinates of a line) (col. 4, ll. 50-55), respectively, and makes the color of each of said ranges change smoothly from the starting point to the ending point by using said brightness parameter (col. 3, ll. 10-26; col. 4, ll. 56-64; col. 6, ll. 35-50).

Shirouzu fails to specifically disclose placing the brightness data of the background at the starting point and the brightness data of the straight line at the ending point. However it would have been obvious to one of skill in the art to incorporate placing the brightness data of the background at the starting point and the brightness data of the straight line at the ending point with the teachings of Shirouzu because Shirouzu teaches inputting both the intensity of the background and of the line drawn into an intensity interpolator, and interpolating the brightness data beginning with the background to create a gradual change of intensity along the line (col. 4, ll. 40-50).

Shirouzu also fails to disclose expressing a second element in a brightness-separable color space where color can be expressed by being separated into brightness and chromaticity. Tachibana discloses providing a mode switching signal to switch between gray-scale and color mode and handling both gray scale and colors (col. 7, ll. 47-64). Shirouzu teaches drawing a pixel utilizing both the intensity data and the X and Y axis drawing data (col. 2, ll. 26-34). It would have been obvious to one of skill in the art to incorporate Tachibana's expression of data in a brightness-separable color space with the disclosure of Shirouzu because Shirouzu teaches providing both intensity data and X, Y data, where the X, Y data is representative of color data and

the intensity data may be represented by any color space representing the separation of luminance to effect drawing a pixel of a partial line.

As per dependent claims 18 and 20, Shirouzu discloses a fourth element which writes a predetermined one or plurality of said partial straight lines (col. 4, ll. 52-54; Fig. 1 "129-132"), and wherein said third element writes said range (col. 4, ll. 50-60; Fig. 1 "133"). Shirouzu fails to specifically disclose a frame buffer, which Tachibana discloses (col. 2, ll. 1-7). Tachibana teaches a technique of drawing jagged straight lines having associated shading data, smoothing the lines by applying antialiasing processing via a processor including a line generator and a buffer for storing the lines (col. 1-2, ll. 35-10). Shirouzu teaches a technique of drawing jagged straight lines having associated shading data, wherein he transmits pixel write signals when the processed data is valid. It would have been obvious to one of skill in the art to include Tachibana's frame buffer in the disclosure of Shirouzu because Shirouzu teaches a processor for generating lines having shading data and drawing smoothed lines by writing the data (abstract), wherein a write signal transfers data to a storage device of a computer.

### ***Response to Arguments***

1. Applicant's arguments filed 12/20/04 have been fully considered but they are not persuasive.

Applicant argues (pp. 3, Para 2 and 4) Shirouzu and Tachibana fail to express color data in a brightness-separable color space where color can be expressed by being separated into brightness and chromaticity.

In reply, Shirouzu teaches representing color data using x and y coordinate data and intensity data. X and y coordinate data define chromaticity values, while the intensity data defines the brightness data. The combination of x and y chromaticity data and the brightness data are representative of XYZ coordinate data which is a well-known conversion space used to represent RGB data (Foley, pp. 580-581, 584-585, provided herein). In teaching using x, y and luminance/brightness coordinates, which correspond to XYZ coordinates and represent RGB data Shirouzu suggests expressing an element in a brightness separable color space where color is expressed in brightness, e.g. luminance and chromaticity, e.g. x and y coordinate data.

Additionally, Tachibana's teaching of handling both gray scale and color suggest that a CRT may display data having both color and brightness characteristics.

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

**Conclusion**

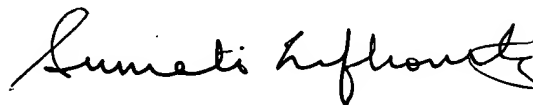
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chante Harrison whose telephone number is 571-272-7659. The examiner can normally be reached on Monday, Tuesday and Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chante Harrison  
Examiner  
Art Unit 2675

June 7, 2005



SUMATI LEFKOWITZ  
SUPERVISORY PATENT EXAMINER